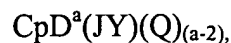


In the Claims

1. (Once amended) A process for the polymerization of olefins comprising contacting olefins with a catalyst system comprising alumoxane and a catalyst precursor represented by the formula



wherein:

B1 Cp is a substituted cyclopentadienyl or a substituted or unsubstituted cycloalkadienyl group other than cyclopentadienyl or a related cycloalkadienyl cogener,

← Each Q is independently an anionic leaving group,

← J is a Group 16 atom,

a is the oxidation state of D,

D is a Group 4 metal, provided however that when Cp is mono-cyclic unsubstituted cyclopentadienyl group, D is not titanium, and

Y is a heteroatom, a substituted heteroatom or a C₁ to C₁₀₀ hydrocarbonyl group that may optionally contain one or more heteroatom(s).

- B2 5. (Once amended) The process of claim 3 wherein Cp is a substituted indenyl or fluorenyl group

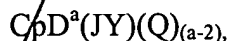
6. (Cancel)

- B3 9. (Once amended) The process of claim 1 wherein Y is a C₁ to C₄₀ alkyl, alkynyl, aryl, or aryl alkyl group.

12. (Cancel)

13. (Cancel)

18. (Once amended) A composition comprising alumoxane and a catalyst precursor represented by the formula



wherein:

B4
Cp is a substituted cyclopentadienyl or a substituted or unsubstituted cycloalkadienyl group other than cyclopentadienyl or a related cycloalkadienyl cogener,

each Q is independently an anionic leaving group,

J is a Group 16 atom,

a is the oxidation state of D,

D is a Group 4 metal, provided however that when Cp is mono-cyclic unsubstituted cyclopentadienyl group, D is not titanium, and

Y is a heteroatom, a substituted heteroatom or a C₁ to C₁₀₀ hydrocarbyl group that may optionally contain one or more heteroatom(s).

B5
22. (Once Amended) The composition of claim 18 wherein Cp is a substituted indenyl or fluorenyl group [the indene or fluorine is substituted].

23. (Cancel)

B6
26. (Once amended) The composition of claim 18 wherein Y is a C₁ to C₄₀ alkyl, alkynyl, aryl, or aryl alkyl group.

29. (Cancel)

30. (Cancel)